



CBCS SCHEME

15MN662

Sixth Semester B.E. Degree Examination, Dec.2019/Jan.2020 Underground Space Technology

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. What is meant by Archeological caves? Explain the need for underground space. (08 Marks)
b. What is meant by Natural caves? Explain the congestion driven needs for development of infrastructure and transporting water. (08 Marks)

OR

- 2 a. What is meant by Tunnel? Explain how tunnel play an important role in underground space? (08 Marks)
b. Explain how underground space is used for storage of materials. (08 Marks)

Module-2

- 3 a. Explain the importance of Hydropower tunnels for underground space. (08 Marks)
b. Explain the suitable conditions for nuclear waste disposal. (08 Marks)

OR

- 4 a. Explain the basic principle for underground storage of LPG product. (08 Marks)
b. Explain the effect of Radioactivity and heat acting on surrounding rock while construction of underground space. (08 Marks)

Module-3

- 5 a. Explain different risk assessment techniques for construction of underground space. (08 Marks)
b. What is meant by Grain storage? Explain the advantages and disadvantages of Grain Storage. (08 Marks)

OR

- 6 a. Explain different strategic utilities for construction of underground space. (08 Marks)
b. What is meant by underground cold storage? Explain the advantages and disadvantages of underground cold storage. (08 Marks)

Module-4

- 7 a. Explain the importance of floating tunnels construction. (08 Marks)
b. Explain the importance of underground ring roads construction in Mega Cities. (08 Marks)

OR

- 8 a. Explain the importance of construction of underground libraries. (08 Marks)
b. Explain the importance of construction of dwelling units. (08 Marks)

Module-5

- 9 Explain the suitable method of Traffic Surveillance and control system in tunnels. (16 Marks)

OR

- 10 Explain the preparation of different underground space application plans. (16 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.